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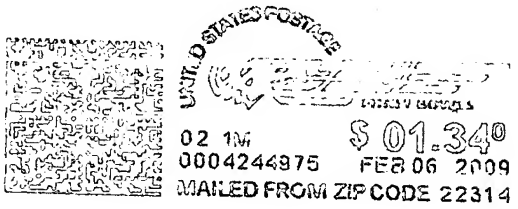

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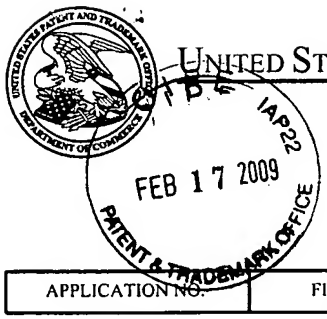

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,622	09/30/2003	Tasadduq Hussain	17416-01USA/03170	6350

7590 02/09/2009

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MCDOWELL, SUZANNE E	

ART UNIT	PAPER NUMBER
1791	

MAIL DATE	DELIVERY MODE
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APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
10675622	9/30/03	HUSSAIN, TASADDUQ	17416-01USA/03170

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Suzanne E.. McDowell	
ART UNIT	**PAPER**
1791	20090204

DATE MAILED:

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Commissioner for Patents

To correct informalities, the Examiner's Answer of November 15, 2007 is corrected as follows:

Sections 8 and 9 are replaced with the sections 8 and 9 on the following pages.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Suzanne E. McDowell whose telephone number is (571) 272-1205. The examiner can normally be reached on Monday and Thursday 8:30-4, Wednesday 6-4:30.
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Suzanne E. McDowell/
Primary Examiner, Art Unit 1791

To correct informalities, the Examiner's Answer of November 15, 2007 is amended as follows:

Sections (8) and (9) are replaced with the following:

(8) Evidence Relied Upon

5,817,348	Ikeda	10-1998
4,955,804	Martell et al.	9-1990
4,668,177	Gatti	5-1987
4,152,383	Ryder	5-1979
4,076,071	Rosenkranz et al.	2-1978
3,998,577	Farrell	12-1976
3,065,501	Gasmire	11-1962

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gatti (US Patent No. 4,668,177) in view of Martell et al. (US Patent No. 4,955,804) and in further view of Gasmire (US Patent No. 3,065,501) and Ikeda (US Patent No. 5,817,348). Gatti ('177) teaches the basic claimed machine

including an injection blow molding apparatus having a turret (10) with at least three planar surfaces (11), said turret being rotated in a counter clockwise direction such that at least one hollow core rod (12) installed on each of said planar surfaces is moved between an injection station (A), a blowing station (B) and a stripping station (C) (see col. 2, lines 14-32 and Figure 1). Further, Gatti ('177) teaches an apparatus for cooling of said hollow core rod including, a cooling manifold (32), inlet and outlet passages (33, 34), radial passages (35, 36) and transverse passages (30, 31) that communicate with the interior of said hollow core rod (12) such that cooling gas is circulated through said hollow rod core (means for circulating conditioned compressed gas).

Regarding claim 28, although Gatti ('177) teaches a cooling gas, Gatti ('177) does not teach a source of compressed air and means to cool (condition) said compressed air using a pressure regulating means. Martell *et al.* ('804) teach an apparatus for cooling an injection- molding tool (18) including, a pressure regulating source of compressed air (54) and a conditioning/cooling unit (58) for cooling said compressed air (58) (cooling) (see col. 3, lines 15- 40 and the Figure). Further, Martell *et al.* ('804) teach that said conditioning/cooling unit (58) has manually operable controls (86,88) that control and vary the temperature of the cooling air and the volume output, hence teaching that said controls (86,88) block passage of cooling air upon zero volume output (see col. 3, lines 37-40) (means for blocking circulation of compressed air from the means for conditioning the compressed air through the at least one core rod). Therefore, it would have been obvious for one of ordinary skill in the art to have provided a pressure regulated source of compressed air and cooling/conditioning means as taught by Martell *et al.* ('804) to cool the core rod in the apparatus of Gatti (' 177) because a cooled gas improves cooling efficiency, hence providing for an improved apparatus, and also because the apparatus of Gatti ('177) requires a cooled gas, hence requiring the pressure regulated

source of compressed air and cooling/conditioning means of Martell *et al.* ('804) in order to function as described.

Further regarding claim 28, Martell *et al.* ('804) teach exhaust channel means (69) for exhausting the cooling air from the cooled tool into the atmosphere (see Figure). Therefore, it would have been obvious for one of ordinary skill in the art to have provided an exhaust channel as taught by Martell *et al.* ('804) in the apparatus of Gatti ('177) because of known advantages such as ease of operation, improved cooling efficiency by providing a cooled gas at all times, and also because the apparatus of Gatti ('177) requires a cooled gas, hence requiring the exhaust channel means of Martell *et al* ('804) in order to function as described.

Further regarding claim 28, Gatti ('177) in view of Martell *et al.* ('804) do not teach means for recompressing and reconditioning the exhausted cooling air. Gasmire ('501) teaches a cooling apparatus including recompressing and reconditioning means for recompressing and reconditioning exhausted cooling gas (see col. 6, lines 5-15). Therefore, it would have been obvious for one of ordinary skill in the art to have provided recompressing and reconditioning means as taught by Gasmire ('501) in the apparatus of Gatti ('177) in view of Martell *et al.* ('804) because, Gasmire ('501) teaches that recompressing and reconditioning of the exhausted cooling gas provides for a more efficient cooling process, hence providing for an improved apparatus.

Further regarding claim 28, Gatti ('177) in view of Martell *et al.* ('804) and in further view of Gasmire ('501) do not teach means for blocking the exhaust system. Ikeda ('348) teaches a blow-molding apparatus including an exhaust system (28) that is selectively blocked in order to selectively permit air to be exhausted to a pressure conditioning system that activates the molding equipment (see col. 5, line 44 through col. 6,

line 32 and Figure 1). Therefore, it would have been obvious for one of ordinary skill in the art to provide the selective exhaust means of Ikeda ('348) to the apparatus of Gatti ('177) in view of Martell *et al.* ('804) and in further view of Gasmire ('501) because Ikeda ('348) teaches that such as exhaust system allows for improved process control, hence providing for an improved apparatus.

3. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Farrell (US Patent No. 3,998,577) in view of Martell et al. (US Patent No. 4,955,804) and in further view of Gasmire (US Patent No. 3,065,501) and Ikeda (US Patent No. 5,817,348). Farrell ('577) teaches the basic claimed machine including, an injection blow molding apparatus and a cooling apparatus having means for circulating a cooling gas within a hollow core rod (see col. 3, lines 22-45 and Figure 5). It is submitted that an injection blow molding apparatus includes a turret with at least three planar surfaces, said turret being rotated in a counter clockwise direction such that at least one hollow core rod installed on each of said planar surfaces is moved between an injection station, a blowing station and a stripping station. Regarding claim 28, although Farrell ('577) teaches a cooling gas, Farrell ('577) does not teach a source of compressed air and means to cool (condition) said compressed air using a pressure regulating means. Martell et al. ('804) teach an apparatus for cooling an injection- molding tool (18) including, a pressure regulated source of compressed air (54) and a conditioning/cooling unit (58) for cooling said compressed air (58) (cooling) (see col. 3, lines 15- 40 and the Figure). Further, Martell et al. ('804) teach that said conditioning/cooling unit (58) has manually operable controls (86,88) that control and vary the temperature of the cooling air and the volume output, hence teaching that said controls (86,88) block passage of cooling air upon zero volume output (see col. 3, lines 37-40) (means for blocking circulation of compressed air from the means for conditioning the compressed air through the at least one core rod). Therefore, it would have been obvious for one of ordinary skill in the art to have provided a pressure regulated source of compressed air and

cooling/conditioning means as taught by Martell *et al.* ('804) to cool the core rod in the apparatus of Farrell ('577) because a cooled gas improves cooling efficiency, hence providing for an improved apparatus, and also because the apparatus of Farrell ('577) requires a cooled gas, hence requiring the pressure regulated source of compressed air and cooling/conditioning means of Martell *et al* ('804) in order to function as described.

Further regarding claim 28, Martell *et al.* ('804) teach exhaust channel means (69) for exhausting the cooling air from the cooled tool into the atmosphere (see Figure). Therefore, it would have been obvious for one of ordinary skill in the art to have provided an exhaust channel as taught by Martell *et al.* ('804) in the apparatus of Farrell ('577) because of known advantages such as ease of operation, improved cooling efficiency by providing a cooled gas at all times, and also because the apparatus of Farrell ('577) requires a cooled gas, hence requiring the exhaust channel means of Martell *et al.* ('804) in order to function as described.

Further regarding claim 28, Farrell ('577) in view of Martell *et al.* ('804) do not teach means for recompressing and reconditioning the exhausted cooling air. Gasmire ('501) teaches a cooling apparatus including recompressing and reconditioning means for recompressing and reconditioning exhausted cooling gas (see col. 6, lines 5-15). Therefore, it would have been obvious for one of ordinary skill in the art to have provided recompressing and reconditioning means as taught by Gasmire ('501) in the apparatus of Farrell ('577) in view of Martell *et al.* ('804) because, Gasmire ('501) teaches that recompressing and reconditioning of the exhausted

cooling gas provides for a more efficient cooling process, hence providing for an improved apparatus.

Further regarding claim 28, Farrell ('577) in view of Martell et al. ('804) and in further view of

Gasmire ('501) does not teach means for blocking the exhaust system. Ikeda ('348) teaches a blow-molding apparatus including an exhaust system (28) that is selectively blocked in order to selectively permit air to be exhausted to a pressure conditioning system that activates the molding equipment (see col. 5, line 44 through col. 6, line 32 and Figure 1). Therefore, it would have been obvious for one of ordinary skill in the art to provide the selective exhaust means of Ikeda ('348) to the apparatus of Farrell ('577) in view of Martell et al ('804) and in further view of Gasmire ('501) because Ikeda ('348) teaches that such as exhaust system allows for improved process control, hence providing for an improved apparatus.

4. Claims 29, 30 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gatti (US Patent No. 4,668,177) in view of Martell et al. (US Patent No. 4,955,804) and in further view of Ikeda (US Patent No. 5,817,348). Gatti ('177) teaches the basic claimed machine including an injection blow molding apparatus having a turret (10) with at least three planar surfaces (11), said turret being rotated in a counter clockwise direction such that at least one hollow core rod (12) installed on each of said planar surfaces is moved between an injection station (A), a blowing station (B) and a stripping station (C) (see col. 2, lines 14-32 and Figure 1). Further, Gatti ('177) teaches an apparatus for cooling of said hollow core rod including, a cooling manifold (32), inlet and outlet passages (33, 34), radial passages (35, 36) and transverse passages (30, 31) that communicate with the interior of said hollow core rod (12) such that cooling gas is circulated through said hollow rod core (means for circulating conditioned compressed gas).

Regarding claim 29, although Gatti ('177) teaches a cooling gas, Gatti ('177) does not teach a source of compressed air and means to cool (condition) said compressed air using a pressure regulating means. Martell *et al.* ('804) teach an apparatus for cooling an injection- molding tool (18) including, a pressure regulating source of compressed air (54) and a conditioning/cooling unit (58) for cooling said compressed air (58) (cooling) (see col. 3, lines 15- 40 and the Figure). Further, Martell *et al.* ('804) teach that said

conditioning/cooling unit (58) has manually operable Controls (86,88) that control and vary the temperature of the cooling air and the volume output. Therefore, it would have been obvious for one of ordinary skill in the art to have provided a pressure regulating source of compressed air and cooling/conditioning means as taught by Martell *et al.* ('804) to cool the core rod in the apparatus of Gatti ('177) because a cooled gas improves cooling efficiency, hence providing for an improved apparatus, and also because the apparatus of Gatti ('177) requires a cooled gas, hence requiring the pressure regulating source of compressed air and cooling/conditioning means of Martell *et al.* ('804) in order to function as described.

Further regarding claim 29, Martell *et al* ('804) teach exhaust channel means (69) for exhausting the cooling air from the cooled tool into the atmosphere (see Figure). Therefore, it would have been obvious for one of ordinary skill in the art to have provided an exhaust channel as taught by Martell *et al.* ('804) in the apparatus of Gatti ('177) because of known advantages such as ease of operation, improved cooling efficiency by providing a cooled gas at all times, and also because the apparatus of Gatti (' 177) requires a cooled gas, hence requiring the exhaust channel means of Martell *et al.* ('804) in order to function as described.

Further regarding claim 29, although Gatti ('177) in view of Martell *et al.* ('804) teach controls that block passage of cooling air upon zero volume output (see col. 3, lines 37-40 of Martell *et al.* ('804)), Gatti (' 177) in view of Martell *et al.* ('804) do not teach separate means for blocking circulation of compressed air from the means for conditioning the compressed air. Ikeda ('348) teaches a blow-molding apparatus including an exhaust system (28) that is selectively blocked in order to selectively permit air to be exhausted to a pressure conditioning system that activates the molding equipment (see col. 5, line 44 through col. 6, line 32 and Figure 1). Therefore, it would have been obvious for one of ordinary skill in the art to provide the selective exhaust means of Ikeda ('348) to block circulation of compressed air from the

means for conditioning the compressed air in the apparatus of Gatti ('177) in view of Martell *et al.* ('804) because Ikeda ('348) teaches that such as exhaust system allows for improved process control, hence providing for an improved apparatus.

Regarding claims 30 and 32, Martell *et al.* ('804) teach an apparatus for cooling an injection-molding tool (18) including a pressure regulating source of compressed air (54) and a conditioning/cooling unit (58) for cooling said compressed air (58) (cooling) (see column 3, lines 15-40 and the Figure). Further, Martell *et al.* ('804) teach that said conditioning/cooling unit (58) has manually operable controls (86, 88) that control and vary the temperature of the cooling air and the volume output. Therefore, it would have been obvious for one of ordinary skill in the art to have provided a pressure regulating source of compressed air and cooling/conditioning means as taught by Martell *et al.* ('804) to cool the core rod in the apparatus of Gatti ('177) in view of Ikeda ('348) because a cooled gas improves cooling efficiency, hence providing for an improved apparatus, and also because the apparatus of Gatti ('177) in view of Ikeda ('348) requires a cooled gas, hence requiring the pressure regulating source of compressed air and cooling/conditioning means of Martell *et al.* ('804) in order to function as described.

5. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gatti (US Patent No. 4,668,177) in view of Martell *et al.* (US Patent No. 4,955,804) and in further view of Ikeda (US Patent No. 5,817,348) and Ryder (US Patent No. 4,152,383). Gatti ('177) in view of Martell *et al.* ('804) and further in view of Ikeda ('348) teaches the basic claimed apparatus as discussed above. Regarding claim 31, Gatti ('177) in view of Martell *et al.* ('804) and further in view of Ikeda ('348) do not teach heating means for heating said compressed air. Ryder ('383) teaches an injection-blow molding tool including a source of compressed air and a heater (41) for heating said compressed air and forcing said heated compressed air through said tool (see column 5, lines 3-21). Further, Ryder ('383) teaches cooling the core rod using cooling air (see column

2, lines 46-49), hence Ryder ('383) teaches both cooling and heating said core rod. It would have been obvious to a person of ordinary skill in the art to have provided a heated as taught by Ryder ('383) to heat the core rod in the apparatus of Gatti ('177) in view of Martell *et al.* ('804) and further in view of Ikeda ('348) because Ryder ('383) specifically teaches the used of heated air to avoid core freeze-up, providing for an improved apparatus by solving the core freeze-up problem.

6. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gatti (US Patent No. 4,668,177) in view of Martell *et al.* (US Patent No. 4,955,804) and in further view of Ikeda (US Patent No. 5,817,348) and Rosenkranz *et al.* (US Patent No. 4,076,071). Gatti ('177) in view of Martell *et al.* ('804) and further in view of Ikeda ('348) teaches the basic claimed apparatus as discussed above. Regarding claim 33, Gatti ('177) in view of Martell *et al.* ('804) and further in view of Ikeda ('348) do not teach means for injecting a spray of water into said compressed air. Rosenkranz *et al.* ('071) teach a cooling apparatus including a source of cooling gas enriched with a liquid (water). It is submitted that the liquid of Rosenkranz *et al.* ('071) is water and that a source of liquid (water) must be present in the apparatus of Rosenkranz *et al.* ('071) in order to provide a cooling gas enriched with a liquid (water). It would have been obvious to a person of ordinary skill in the art to have provided means to inject a liquid (water) as taught by Rosenkranz *et al.* ('071) in the apparatus of Gatti ('177) in view of Martell *et al.* ('804) and further in view of Ikeda ('348) because Rosenkranz *et al.* ('071) specifically teach that the injection of a liquid into the cooling gas provides for an increased cooling effect, hence increasing productivity and providing for an improved apparatus.

7. Claims 29, 30 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farrell (US Patent No. 3,998,577) in view of Martell et al. (US Patent No. 4,955,804) and in further view of Ikeda (US Patent No. 5,817,348). Farrell ('577) teaches the basic claimed machine including, an injection blow molding apparatus and a cooling apparatus having means for circulating a cooling gas within a hollow core rod (see

col. 3, lines 22-45 and Figure 5). It is submitted that an injection blow molding apparatus includes a turret with at least three planar surfaces, said turret being rotated in a counter clockwise direction such that at least one hollow core rod installed on each of said planar surfaces is moved between an injection station, a blowing station and a stripping station.

Regarding claim 29, although Farrell ('577) teaches a cooling gas, Gatti ('177) does not teach a source of compressed air and means to cool (condition) said compressed air using a pressure regulating means. Martell *et al.* ('804) teach an apparatus for cooling an injection- molding tool (18) including, a pressure regulating source of compressed air (54) and a conditioning/cooling unit (58) for cooling said compressed air (58) (cooling) (see col. 3, lines 15- 40 and the Figure). Further, Martell *et al.* ('804) teach that said conditioning/cooling unit (58) has manually operable controls (86,88) that control and vary the temperature of the cooling air and the volume output. Therefore, it would have been obvious for one of ordinary skill in the art to have provided a pressure regulating source of compressed air and cooling/conditioning means as taught by Martell *et al.* ('804) to cool the core rod in the apparatus of Farrell ('577) because a cooled gas improves cooling efficiency, hence providing for an improved apparatus, and also because the apparatus of Farrell ('577) requires a cooled gas, hence requiring the pressure regulating source of compressed air and cooling/conditioning means of Martell *et al.* ('804) in order to function as described.

Further regarding claim 29, Martell *et al.* ('804) teach exhaust channel means (69) for exhausting the cooling air from the cooled tool into the atmosphere (see Figure). Therefore, it would have been obvious for one of ordinary skill in the art to have provided an exhaust channel as taught by Martell *et al.* ('804) in the apparatus of Farrell ('577) because of known advantages such as ease of operation, improved cooling efficiency by providing a cooled gas at all times, and also because the apparatus of Farrell ('577) requires a

cooled gas, hence requiring the exhaust channel means of Martell *et al.* ('804) in order to function as described.

Further regarding claim 29, although Farrell ('577) in view of Martell *et al.* ('804) teach controls that block passage of cooling air upon zero volume output (see col. 3, lines 37-40 of Martell *et al.* ('804)), Farrell ('577) in view of Martell *et al* ('804) do not teach separate means for blocking circulation of compressed air from the means for conditioning the compressed air. Ikeda ('348) teaches a blow-molding apparatus including an exhaust system (28) that is selectively blocked in order to selectively permit air to be exhausted to a pressure conditioning system that activates the molding equipment (see col. 5, line 44 through col. 6, line 32 and Figure 1). Therefore, it would have been obvious for one of ordinary skill in the art to provide the selective exhaust means of Ikeda ('348) to block circulation of compressed air from the means for conditioning the compressed air in the apparatus of Farrell ('577) in view of Martell *et al.* ('804) because Ikeda ('348) teaches that such as exhaust system allows for improved process control, hence providing for an improved apparatus.

Regarding claims 30 and 32, Martell *et al.* ('804) teach an apparatus for cooling an injection-molding tool (18) including a pressure regulating source of compressed air (54) and a conditioning/cooling unit (58) for cooling said compressed air (58) (cooling) (see column 3, lines 15-40 and the Figure). Further, Martell *et al.* ('804) teach that said conditioning/cooling unit (58) has manually operable controls (86, 88) that control and vary the temperature of the cooling air and the volume output. Therefore, it would have been obvious for one of ordinary skill in the art to have provided a pressure regulating source of compressed air and cooling/conditioning means as taught by Martell *et al.* ('804) to cool the core rod in the apparatus of Farrell ('577) in view of Ikeda ('348) because a cooled gas improves cooling efficiency, hence providing for an improved apparatus, and also because the apparatus of Farrell ('577) in view of Ikeda ('348) requires a

cooled gas, hence requiring the pressure regulating source of compressed air and cooling/conditioning means of Martell *et al.* ('804) in order to function as described.

8. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Farrell (US Patent No. 3,998,577) in view of Martell *et al.* (US Patent No. 4,955,804) and in further view of Ikeda (US Patent No. 5,817,348) and Ryder (US Patent No. 4,152,383). Farrell ('577) in view of Martell *et al.* ('804) and further in view of Ikeda ('348) teaches the basic claimed apparatus as discussed above. Regarding claim 31, Farrell ('577) in view of Martell *et al.* ('804) and further in view of Ikeda ('348) do not teach heating means for heating said compressed air. Ryder ('383) teaches an injection-blow molding tool including a source of compressed air and a heater (41) for heating said compressed air and forcing said heated compressed air through said tool (see column 5, lines 3-21). Further, Ryder ('383) teaches cooling the core rod using cooling air (see column 2, lines 46-49), hence Ryder ('383) teaches both cooling and heating said core rod. It would have been obvious to a person of ordinary skill in the art to have provided a heated as taught by Ryder ('383) to heat the core rod in the apparatus of Farrell ('577) in view of Martell *et al.* ('804) and further in view of Ikeda ('348) because Ryder ('383) specifically teaches the used of heated air to avoid core freeze-up, providing for an improved apparatus by solving the core freeze-up problem.

9. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Farrell (US Patent No. 3,998,577) in view of Martell *et al.* (US Patent No. 4,955,804) and in further view of Ikeda (US Patent No. 5,817,348) and Rosenkranz *et al.* (US Patent No. 4,076,071). Farrell ('577) in view of Martell *et al.* ('804) and further in view of Ikeda ('348) teaches the basic claimed apparatus as discussed above. Regarding claim 33, Farrell ('577) in view of Martell *et al.* ('804) and further in view of Ikeda ('348) do not teach means for injecting a spray of water into said compressed air. Rosenkranz *et al.* ('071) teach a cooling apparatus including a source of cooling gas enriched with a liquid (water). It is submitted that the liquid of Rosenkranz

et al. ('071) is water and that a source of liquid (water) must be present in the apparatus of Rosenkranz *et al.* ('071) in order to provide a cooling gas enriched with a liquid (water). It would have been obvious to a person of ordinary skill in the art to have provided means to inject a liquid (water) as taught by Rosenkranz *et al.* ('071) in the apparatus of Farrell ('577) in view of Martell *et al.* ('804) and further in view of Ikeda ('348) because Rosenkranz *et al.* ('071) specifically teach that the injection of a liquid into the cooling gas provides for an increased cooling effect, hence increasing productivity and providing for an improved apparatus.

/Suzanne E. McDowell/
Primary Examiner, Art Unit 1791